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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/924,624  | 08/08/2001  | Shek Fai Lau         | 112440-782          | 5227             |
| 29190   | 7590        | 03/15/2006           | EXAMINER            |                  |
| BELL, BOYD & LLOYD LLC<br>P.O. BOX 1135<br>CHICAGO, IL 60690-1135 |             |                      | TRAN, THAO T        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 1711                |                  |
| DATE MAILED: 03/15/2006   |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                   |  |
|------------------------------|--------------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/924,624 | <b>Applicant(s)</b><br>LAU ET AL. |  |
|                              | <b>Examiner</b><br>Thao T. Tran      | <b>Art Unit</b><br>1711           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 29-37,50 and 94-101 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-32,37,50 and 94-101 is/are rejected.
- 7) ☒ Claim(s) 33-36 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/2/05, 9/23/04, 9/20/04, 4/4/04, 12/23/03</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. This is in response to the Reply filed on 02/02/2005.
2. Claims 29-37, 50, and 94-101 are currently pending in this application. Claims 43-46, 48-49, 51-55, and 61-63 have been canceled.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 94 is rejected under 35 U.S.C. 102(b) as being anticipated by Moller et al (US Pat. 1,469,275).

Moller discloses an electrostatic precipitator, comprising discharge electrodes and collecting electrodes 2. Each discharge electrode has two electrode wire elements 8,9. The discharge electrode is provided with a ring 25 connected thereto by an insulating means 26 that serves to scrape and clean the collecting electrodes when the discharge electrodes move. (See Figs. 1-4; page 1, ln. 87-94; page 2, ln. 4-37).

Although Moller does not disclose that ring 25 attached to insulating means 26 would frictionally clean the collecting electrode 2 when the discharge electrode is manually removed from the electrostatic precipitator, it appears that ring 25 in the invention of Moller would inherently scrape off dust deposit on the collecting electrode when the discharge electrode is removed from the device.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 29-37, 50, and 95-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moller as applied to claim 94 above.

Moller is as set forth in claim 94 above and incorporated herein.

In regards to claim 29, although there is no mention of a specific location of the ring 25 and the insulating means 26 with respect to the discharge electrode in the invention of Moller, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the ring 25 and the insulating means 26 would have been attached at the base of the discharge electrode, for the purpose of providing thorough cleaning of the collecting electrodes.

In regards to claims 30-32, 37, 50, 95-97, and 99-101, Moller further teaches the discharge electrode elements 8 and 9 are provided with enlargements, lugs, or knots 22, or the like, which in the movement of the electrode elements on one another would wipe off dust deposit (see page 1, ln. 25-48; page 2, ln. 30-34).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the cleaning mechanism of Moller would have included a strip comprising a slit to fit the strip around the other electrode such that when the strip moves along the electrode, it would have scraped off dust deposit. Since Moller teaches enlargements, lugs, or the like of the cleaning mechanism, it would have been inclusive of other shapes or

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configurations that would have scraped off the dust deposit as well, such as a strip with a slit fitting around the other electrode element.

Although Moller is silent with respect to the thickness of the strip, it would have been obvious to one of ordinary skill in the art, that thickness of the strip would have been determined depending upon different parameters, such as the type of the strip, the type and thickness of the electrode, in order to bring forth maximal benefits attendant therewith.

#### ***Allowable Subject Matter***

7. Claims 33-37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: no prior art has been found to teach, disclose, or fairly suggest an air conditioner, comprising a means for cleaning including an arm, made of electrically insulating material, having a first distal end and a second end that is biasedly pivotably attached to the base of the second electrode; in combination with all of the other limitations of claims 29 and 33.

#### ***Contact Information***

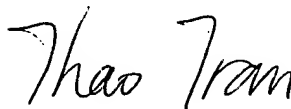
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tt  
March 6, 2006



**THAO T. TRAN  
PATENT EXAMINER**